

Purpose As sleep disturbances affect the majority of individuals with Parkinson's disease, Chaudhuri and colleagues created an instrument to evaluate sleep quality in this patient population. The 15-item scale assesses sleep onset and maintenance, restlessness, nightmares and hallucinations, nocturia, motor symptoms, refreshment, and daytime sleepiness.

Population for Testing The scale has been validated with Parkinson's patients aged 38–89 years.

Administration Requires approximately 5 min for completion. The instrument is a self-report, pencil-and-paper measure, though caregivers may also respond as proxies.

Reliability and Validity The developers [1] completed a psychometric evaluation of the instrument and found a test-retest reliability of .94. Additionally, patients diagnosed with more advanced stages of the disease receive significantly lower scores on the scale than those in early stages (indicating more acute sleep disturbances).

Obtaining a Copy A copy can be found in the original article published by developers [1].


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Scoring The instrument uses a visual analogue scale – a 100-mm line extending between two extremes on which respondents place marks meant to represent their experiences with sleep. Scores are found by measuring the distance, to the closest 0.1 cm, between the start of the line and the respondent's mark. Lower scores indicate that sleep issues are “always” present and that sleep quality is “awful,” while higher scores mean that sleep difficulties are “never” present. As results are converted to centimeters, total scores can range from 0 to 150. However, individuals responding to visual analogue scales are often reluctant to make use of the highest and lowest extremes. Developers suggest that items 1, 3, 14, and 15 may be particularly important for identifying individuals who require further screening.



Parkinson's Disease Sleep Scale (PDSS)

How would you rate the following, based on your experience during the past one week.
(Place a cross at the appropriate point on the line)

1. The overall quality of your night's sleep is:	AWFUL	EXCELLENT	0 1 2 3 4 5 6 7 8 9 10
2. Do you have difficulty falling asleep each night?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
3. Do you have difficulty staying asleep?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
4. Do you have restlessness of legs or arms at night or in the evening causing disruption of sleep?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
5. Do you fidget in bed?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
6. Do you suffer from distressing dreams at night?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
7. Do you suffer from distressing hallucination at night (seeing or hearing things that you are told do not exist)?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
8. Do you get up at night to pass urine?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
9. Do you have incontinence of urine because you are unable to move due to "off" symptoms?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
10. Do you experience numbness or tingling of your arms or legs which wake you from sleep at night?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
11. Do you have painful muscle cramps in your arms or legs whilst sleeping at night?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
12. Do you wake early in the morning with painful posturing of arms or legs?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
13. On waking do you experience tremor?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
14. Do you feel tired and sleepy after waking in the morning?	ALWAYS	NEVER	0 1 2 3 4 5 6 7 8 9 10
15. Have you unexpectedly fallen asleep during the day?	FREQUENTLY	NEVER	0 1 2 3 4 5 6 7 8 9 10

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Reference

1. Chaudhuri, K. R., Pal, S., DiMarco, A., Whately-Smith, S., Bridgman, K., Mathew, R. Pezzela, F. R., Forbes, A., Högl, B., & Trenkwalder, C. (2002). The Parkinson's disease sleep scale: a new instrument for assessing sleep and nocturnal disability in Parkinson's disease. *Journal of Neurology, Neurosurgery, & Psychiatry*, 73(6), 629–635.

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Hjort, N., Ostergaard, K., & Dupont, E. (2004). Improvement of sleep quality in patients with advanced Parkinson's disease treated with deep brain stimulation of the subthalamic nucleus. *Movement Disorders*, 19(2), 196–199.

Representative Studies Using Scale

Dhawan, V., Dhoat, S., Williams, A., DiMarco, A., Pal, S., Forbes, A., Tobias, A., Martinez-Martin, P., & Ray, C. K. (2006). The range and nature of sleep dysfunction in